



Green Eyes: Effects of forest conversion on plant communities and soil

The conversion of coniferous forests dominated by Norway spruce and Scots pine to mixed species forests with higher proportions of deciduous trees is a major aim of forestry in Germany. The goals are (i) the establishment of stable forest ecosystems, that are better adapted to the expected effects of climate change, and (ii) the renaturation of the ecosystems that were degraded by former land-uses.



As part of the proposed Master's thesis, the influence of about 80 years, of the so-called "Green Eyes" (small-sized groups of European beech within coniferous stands) on ground vegetation and soil quality will be investigated. The study is located at four sites on acidic parent rocks in Eastern Thuringia and Saxony (Central Ore Mountains). The following key questions will be examined:

- Do tree species affect soil vegetation and soil chemistry along spatial transects, ranging from the center of the beech group to the area covered by the coniferous species?
- How do soil ecological indicators change after a period of 80 years of forest conversion?

The master thesis includes the following activities:

- Small-scale vegetation surveys along the tree-species transect at the four study sites,
- investigation of different soil characteristics (soil acidity, C, N analysis) based on already existing samples of the humus layer and the respective mineral soil
- Data evaluation (in R)



Start is in SS 2019 (April 2019)

The proposed Master thesis is jointly supervised by *Institutes for Geography and Ecology and Evolution*.

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